- I. (currently amended) A method for of automating an interaction between a buyerbidder and an electronic, variable, dynamic pricing online auction service comprising of the steps of
  - a. receiving a registration of a buyerbidder at an Internet, webenabled, buyerbidder bidding application site (site) by creating logon
    credentials that are used to at least one of authenticate and/or authorize the
    buyerbidder's access to at least one of the site, a portfolio of the
    buyerbidder, and/or account information of the buyerbidder;

wherein—the logon eredentials are provided by an independent 3rd party through a logon-agent using at least one of proxied identification and digital certificates;

- -b. receiving entered information about financial transaction instruments of the <u>buyerbidder</u>, contact information including at least one of a telephone number, an email address, and/or a physical mail address, and product preferences into an auction profile of the <u>buyerbidder</u>;
- c. receiving a search query from the buyerbidder for a desired product from the product auctions of a plurality of auction sites including at least one of keywords, model identification, brand identification, synonyms, and/or unique identification, using at least one of a search agent, a persistent search agent, and/or a meta-search agent, and providing returned auctions, including retrieving current status of the product auctions and presenting the current status to the buyerbidder,

- d. receiving a selection of one or more of the returned auctions to store in the portfolio of the buyerbidder for tracking by one or more scan agents and for bidding by one or more bid proxies;
- d. receiving selections of a plurality of product auctions of the returned auctions and placing the plurality of product auctions into the portfolio for use by a cascaded hid-proxy;
- e. providing monitoring, by the one or more scan agents, of temporal progression of the <u>at least one plurality of product</u> auctions, and notifying the <u>Buyerbidder via a messaging center of any changes in relevant</u> aspects of the current status of any of the <u>plurality at least one of product</u> auctions that would prevent an initial bid from being placed by the bid proxy;
- f. enabling activation of the one or more bid proxies as any completing auction that nears completion of the plurality at least one of product auctions, to begin placing one or more bids within bidding parameters until the completing auction is either won or lost by time of auction closing, including enabling interaction between the scan agent and the bid proxy to place the bid of the buyerbidder as close to the time of auction closing as possible and to confirm that a counter-offer has not outbid a most recent bid of the Buyerbidder; and
- g. computing and executing another valid higher bid for a forward auction or lower bid for a reverse auction that is within the bidding parameters, if the counter-offer has been made and accepted by the auction

site that is higher for the forward auction or lower for the reverse auction than the most recent bid detected by the scan agent.

2. (Currently amended) A—The method of claim 1, wherein (c) comprises: for automating a Buyerbidder's online, electronic search agent of specific electronic auctions on a least one targeted auction site comprising:

<u>la.</u> providing a programmable search agent, <u>and/or through</u> using an <u>application programming interface</u> (API) that enables <u>programmatic retrieval of the auction information</u>; from a <u>servernode</u>, that searches auction catalogs of a plurality of auction sites and identifies correlations between

one of entered and/or stored, and ean-include at least one of a keywords, model identification, synonym, unique identification, product classifications, and/or price ranges, and

products one or more auctions that are listed for sale through in the auction site's catalog available via dynamic price competitive bidding using a number of electronic auction techniques including at least one of a Forward, a Dutch, a Yankee, and/or a Reverse auction techniques.

- 3. (Currently amended) The method according to claim 2, further comprising:
  - 2b. providing at least one additional programmable search agents

searching said plurality of auction sites <u>substantially</u> simultaneously for more auctions<del>products</del>; and

- <u>3e.</u> returning a found set of said one or more products for further review and selection by a <u>Buyerbidder</u>.
- 4. (Currently amended) The A method of claim 1, wherein (f) comprises:

-for-executing one or more programmed bid proxies that are controlled by bid parameters comprising the steps of:

la. retrieving, using a scan agent, the current auction status within a time to auction close window (TACW) wherein said TACW spans a range of time beginning at a time calculated by subtracting an absolute time to start proxied bidding from an auction end time, and recalculating said TACW if the auction end time is extended, and ending with a time of the auction end time, wherein the TACW defines a period of time when a scan agent and a bid proxy work in tandem to place as many bids as necessary to win an auction within programmed bidding and/or algorithmically computed bidding parameters;

- 2b. determining, by a bid proxyscan agent, if parameters of the current auction status fall within a range of the programmed bidding and/or algorithmically computed bidding acceptable auction status parameters;
- 3e. computing, using the bid proxy, a next valid portfolio bid price by at least one of adding a minimum valid price increment to a current auction status price to compute a bid n offer price, if the current

auction status price is below a maximum price for a forward auction, and/or, substracting a minimum valid price decrement from the current auction status price to compute the bid price, if the current auction status price is above a minimum price for a reverse auction, using the parameters of the current auction status;

- 4d. activating a bid proxy, and placing a bid in accordance with an auction site specific protocol, and/or through using an application programming interface (API) that enables programmatic retrieval of the auction information, if the offerbid price is below the maximum price for the forward auction or above the minimum price for the reverse auction in the programmed bidding and/or algorithmically computed acceptable auction status parameters, wherein the auction site specific protocol varies from site to site, and a basic protocol involves at least one of entering the offer-bid price, and/or authenticating as the Buyerbidder so the offer-bid price can be correlated with an account of the Buyerbidder on the auction site and entered by the bid proxy on behalf of the Buyerbidder;
- e5. retrieving the current auction status, using the scan agent, to verify that a latest bid of the Buyerbidder has been accepted by the auction site;
- f6. repeating steps (b2) through (e5) until auction end, if the current auction status indicates that the offer bid price of the Buyerbidder has been rejected and/or outbid by another bidder; and

- win/loss status of the auction and storing the win/loss status in the portfolio of the Buyerbidder for later reporting to the Buyerbidder through a messaging system.
- 5. (Currently amended) The method of claim 4, wherein step (1a) comprises at least one of:
  - 1A. computing the TACW based on a value derived from a data warehouse of the site <u>for similar auctions</u>, wherein the value derived is computed based on a minimum absolute time that has been logged for prior successful auctions for a given auction site, wherein the minimum absolute time is a time till close (TTC) value; and <u>/or</u>
  - 2B. computing the TTC value using probability analysis and auction site telemetry information computed based on recent response times and network latencies as determined by the scan agent.
- 6. (Currently amended) A—The method of claim 1, wherein (d) further comprises for , if receiving a selection of a plurality of product auctions of the returned auctions, then placing the plurality of product auctions into the portfolio for use by a cascaded bid proxy; and providing cascaded bidding comprising:

<u>la</u>. executing a series of cascaded bids for an identical product in temporally sequential auctions according to a <u>the programmed set of bidding</u> parameters, wherein the bidding parameters comprise at least one of the following types:

a programmed bid value limit for one or more units of product;

an algorithmically calculated bid value limit based on prevailing market prices for similar and/or identical products monitored by at least one of search and/or scan agents and/or stored in a data warehouse.

a directed programmed bid;

an algorithmically computed bid;

an explicitly defined set of programmed bidding parameters; and/or

an authorization to algorithmically compute the best market price, wherein the best market price is the lowest winning bid for a forward auction or the highest winning bid for the reverse auction.

- 7. (Currently amended) The method according to claim 1, wherein step (e) comprises:
  - 1. notifying the <u>Buyerbidder</u> when a current price of a targeted auction exceeds programmed bid parameters of the bid proxy, comprising at least one of:
    - a. examining with an internal scan agent, bid information stored in the portfolio of the Buyerbidder; and
    - b. sending information to the Buyerbidder using at least one of wired and/or

(09/963,742)

	wireless messaging technologies
I	including at least one of an email, a page, a text page,
	an instant message, a short message system (SMS)
	message, a multimedia message system (MMS)
	message, and/or an other
1	communication, if a programmed bid with invalid
	bid parameters and/or other important information
	is detected.
8. (Currently amended) (e) comprises:	The method according to claim l, wherein step
(e) comprisçs.	1. notifying the Buyerbidder when an auction
	• •
	has been won using at least one of a bid proxy of the
	Buyerbidder and/or a programmed bid,
	wherein information is sent to the Buyerbidder
	using at least one of wired and/or wireless messaging
d.	technologies including at least one of
	an email,
	a page.
	a text page,
	an instant message,
	a short message system (SMS) message,
	a multimedia message system (MMS) message.
T.	a communication, and

a hypertext link to bid information stored in the portfolio of the Buyerbidder.

9. (Currently amended) A—The method according to claim 1, wherein (e)

-scanning online auctions using a scan agent, comprising:

<u>la.</u> scanning web-pagescontent of a targeted auction site and extracting relevant auction status information including at least one of an open, a close, a maximum bid, a minimum valid-bid, a last bidder, and/or other auction parameters and information using a scan agent that can be used to compute a valid <u>Buyerbidder</u> bid, comprising:

al. retrieving one or more programmed bids, using a scan agent, from one or more portfolios of one or more buyerbidders;

<u>b2</u>. extracting auction site identification from programmed bid information;

c3 activating the appropriate scan agent based on the auction site identification and domain information of an auction site;

d4. retrieving using the scan agent the latest auction site characterization information available for that auction site;

e5.retrieving, using the scan agent, auction information from the auction site by at least one of navigating auction information pages-content of the auction site, and/or through using an application programming interface (API) that enables programmatic retrieval of the auction information;

f6. the current auction parameters are retrieved, analyzed and stored in entry for the auction in the portfolio of the Buyerbidder; and

- g7. performing further analysis by at least one of one or more site agents and/or processes.
- 10. (Currently amended) The method according to claim 19 wherein (e), further eomprising comprises:
  - 1b. scanning status pagescontent of the auction site to track progress and/or status of a targeted auction prior auction close, the method comprising of the steps of:
    - <u>al</u>. scanning, using the scan agent, all portfolios of all <u>Buyerbidders</u> for all active auctions in each of the individual portfolios of the <u>Buyerbidders</u>;
    - <u>b</u>2. scanning slowly of the auctions listed in the each of the individual portfolios is performed for those auctions with TTC values that exceed a slow/fast scan threshold (SFST) value, wherein a slow/fast scan window (SFSW) is computed by subtracting the SFST value from each individual auction end time:
    - evaluating auction status information from those auctions that are before the start of the SFSW to determine if the Buyerbidder's bid parameters for a given auction are no longer valid, including messaging the reason for non-validity to the

(09/963.742)

Buyerbidder using the messaging system, if the bid parameters are no longer valid for a given auction;

- d4. changing status of programmed bid from slow scan to fast scan, if the scan agent determines that a given auction falls within the SFSW;
- e5. scanning more frequently a programmed bid in fast scan mode in order to determine the current response time or latency of the auction site based on prevailing network traffic conditions; and
- f6. transitioning the programmed bid into active bid mode, if a bid is within the TACW, and execution of a bid proxy programmed bid that is controlled by bid parameters can be performed.
- 11. (Currently amended) The method according to claim 91. wherein (e), further comprisesing:
  - <u>search agents</u> to distributed network nodes including at least one of a server, a workstation, and/or a peer device) and executing the seanning scanning and/or searching process ("peer sean-agent") from that node in response to high loading conditions on the master node <u>and/or counter-measures</u> enabled by the auction site, a method comprising the steps of:

- at. distributing and activating on peer servers-nodes a copy of the agents involved in the bidding process, if at least one of the scan agent, and/or any other agent, detects that the agent cannot access the auction site because the agent is not receiving a response to inquiries including at least one of a Post and/or a Get, wherein the peer servers-nodes are previously configured as support servers-nodes to the site and information about the peer servernodes is stored in a directory on a master node at the site;
- <u>b2</u>. distributing, by the master node, bid proxies of auctions from the portfolio of the <u>Buyerbidder</u> and bid parameters to the designated peer <u>servernode</u> now assigned the task of bidding on a given auction by the master node;
- c3. executing on the peer servernode the auction bid proxy as would the master node without control from the master node; and
- d4. returning to the master node subsequent to auction end, and logging into the portfolio, the resulting win/loss/failed status of the auction.
- 12. (Currently amended) The method according to claim 11, wherein step (<u>b</u>2) comprises:
  - 1i. distributing of the bid proxies to distributed network nodes including at least one of a server, a workstation, and/or a peer device, and executing a peer bid proxy process initiated from a node responsive to at least one of high loading conditions on a

master node, another node, and/or counter-measures enacted enabled by the auction site.

- 13. (Currently amended) A-The method method of claim 1, wherein (e) comprises:

  for adapting to changes in auction site layout and relevant auction site information,
  comprising:
  - pagescontent of an auction site and and/or changes across the plurality of web pagesthe content of the auction site, wherein said content comprises at least one of a page, a link, a webpage, web content, a screen, data, a data feed, and/or data accessible by an application programming interface (API), so that one or more scan agents and/or one or more bid proxies intelligently adapt to format and/or data type changes in the web to pagescontent of the auction site comprising:
    - al. alerting by the scan agent of an intelligent process known as the information extractor when old information that is expected to be found on a new page within the auction site content is not found;
    - b2. examining a new pagethe auction site content layout by the information extractor and comparing the new page content layout data to a stored copy of the old page content layout of a known navigable page content to determine if the old information is located elsewhere on the new page in the new content;

(09/963,742)

- 3c. modifying the parameters of the scan agent by the information extractor to identify where the old information is now located on the new page in the new content, if the old information is found in another location in the new page content layout than it was in the old page content layout;
- d4. stepping through one or more previous and/or subsequent pages—sets of content in a navigation path of pages—content of the auction site, by the information extractor, and scanning new links—content to see if the old information has been moved to another pageset of content, if the old information is not found in the new page contentlayout;
- es. modifying parameters of the scan agent, by the information extractor, to identify the new location of the old information, if the old information is found; and
- page-content and resulting navigation path, indicating a need to be retrained by the administrator, through programming, using at least one of a neural net engine and/or other artificial intelligence (AI) algorithm controlling the scan agent and/or another intelligent engine reprogramming mechanism, if the old information is not found.

- 14. (Currently amended) The method according to claim 1, wherein (b) further comprisesing:
  - <u>1</u>h. managing at least one of payment instruments, payment devices, contact, and/or financial status, of the <u>Buyerbidder</u> through an online, personalizable <u>buyerbidder</u> profile account (account) for auction win settlement comprising:
    - Buyerbidder for the collection of contact information including at least one of an email, a physical mail address, a telephone number, a pager, and/or an alternative contact information, and/or financial instrument information;
    - <u>b2</u>. creating an account information record in a database of the information and linking the account information record to any activated auction portfolios of the <u>buyerbidder</u>; and
    - c3. providing access for the Buyerbidder to access the account information record and/or modifying the account information record as needed subsequent to buyerbidder authentication.
  - 15. (Currently amended) The method of claim 41, further comprising:
    - 8h. accelerating the performance of thea bid proxy by using network telemetry and/or statistical algorithms to improve the win probability of the bid, comprising:

- at. testing, using a telemetry agent, the response time of an auction site to periodically ascertain temporal latency for various types of queries and/or commands;
- b2. optimizing balance between when to place an initial bid and when to win the auction at a best market price keeping winning price as low as possible, using information on the response time obtained during response time testing, wherein response time information is stored in an updateable profile for each auction site and is used by the bid proxy, and wherein the telemetry information collected comprises at least one of a page content screen type, and/or a transaction type including at least one of a query for auction status and/or a bid command, and/or a time span from a query to a response.

## 16. (Currently amended) The method according to claim 1, further comprising:

h. receiving one or more persistent search agents that are programmed, persistent and operative to search one or more auction sites for product auctions of a desired product and providing returned auctions that a bid proxy can execute using at least one of a directed programmed bid, and/or an algorithmically calculated bid, wherein the one or more persistent search agents periodically search a list of a plurality of auction sites for product auctions that correlate with preference information stored in the profile portfolio of a the buyerbidder, comprising:

- 1. creating entries by the Buyerbidder for each kind of product of which the Buyerbidder desires to be notified if an auction for a product containing this description becomes available for bidding on any and all auction sites;
- 2. periodically searching, using the one or more persistent search agents, search services of the plurality of auction sites to see if a matching product can be found in listed auctions of products being auctioned; and
- 3. sending, to the Buyerbidder, a link to a found product using the message centerauction communicated using at least one of wired and/or wireless messaging technology, if any matches are found; and
  - i. receiving at least one of

definitions of programmed bidding parameters of the directed programmed bid to the bid proxy, and/or

authorization of the bid proxy to algorithmically compute a lowest market price based on reviewing prevailing market prices for similar products as determined by information stored in a data warehouse.

17. (Currently amended) The method according to claim 1, further comprising:

h. storing product preferences of the <u>Buyerbidder</u> for products, including preference information that can be used by at least one of a persistent search agent, and/or a bid proxy operating under at least one of directed programmed bidding, and/or algorithmically calculated bidding parameters.

## 18. (New) The method according to claim 1, further comprising:

wherein a self-contained auction site comprises at least one of one or more auction services, one or more search agents, one or more scan agents, and/or one or more bid proxies within the same at least one of owner-operated infrastructure, marketing brand, and/or network domain.

## 19. (New) The method according to claim 2, further comprising:

algorithmically controlled selection and/or prioritization of auctions returned by the one or more search agents based on 3<sup>rd</sup> party performance evaluation and/or ranking information (ranking) on an auction host,

wherein the auction host comprises a seller in a Forward auction or a buyer in a Reverse auction;

wherein a bidder has a preference for conducting auction transactions with auction hosts who are ranked better in terms of at least one of performance, quality and/or integrity when compared to other auction hosts;

wherein the bidder can set thresholds in the portfolio for filtering auctions from the one or more search agents that do not meet the minimum acceptable criteria for selection of any given auction based on ranking;

wherein a better ranking can be based on at least one of compiled quantitative data comprising at least one of historical transaction satisfaction ratings from prior auction transaction bidders, and/or 3<sup>rd</sup> party evaluation services, cumulative number of successful prior auction transactions, geographic region of auction and/or product source, settlement currency, other secondary costs including at least one of shipping and/or subjective data including at least one of content of complaints filed on previously unsuccessful auction transactions, and/or the accuracy and/or depth of product information disclosed through the auction.

20. (New) The method according to claim 1, wherein (a) comprises:

registering a new bidder on multiple auction sites through the use of a registration proxy that mimics the registration steps for each auction site using the master profile data of the bidder, comprising:

- a. receiving a bidder registration including a super-set of the information needed by multiple auction sites for proper registration of the bidder's information for a valid account on any given auction site;
- b. mimicing the actions of the bidder by a registration agent by navigating through the auction site's registration content and entering the appropriate contact and/or financial instrument information for the bidder; and

- c. prompting the bidder for manual entry for any validation steps using the bidder's email account and/or authentication credentials that cannot be performed through the auction site's content.
- 21. (New) The method according to claim 1, wherein the logon credentials are provided by an independent 3rd party through a logon agent using at least one of proxied identification and/or digital certificates.
- 22. (New) A computer readable medium embodying program logic which when executed performs the method of claim 1.
- 23. (New) A system for automating an interaction between a bidder and an electronic, variable, dynamic pricing online auction service comprising:

means for receiving a registration of a bidder at an Internet, webenabled, bidder bidding application site (site) by creating logon credentials that are used to authenticate and authorize the bidder's access to the site, a portfolio of the bidder, and account information of the bidder;

means for receiving entered information about financial transaction instruments of the bidder, contact information including at least one of a telephone number, an email address, and a physical mail address, and/or product preferences into an auction profile of the bidder;

means for receiving a search query from the bidder for a desired product from the product auctions of a plurality of auction sites including at least one of keywords, model identification, brand identification, synonyms,

and/or unique identification, using at least one of a search agent, a persistent search agent, and/or a meta-search agent, and providing returned auctions, including retrieving current status of the product auctions and presenting the current status to the bidder:

means for receiving a selection of one or more of the returned auctions to store in the portfolio of the bidder for tracking by one or more scan agents and for bidding by one or more bid proxies;

means for providing monitoring, by the one or more scan agents, of temporal progression of the at least one product auction, and notifying the bidder of any changes in relevant aspects of the current status of any of the at least one product auction that would prevent an initial bid from being placed by the bid proxy;

means for enabling activation of the one or more bid proxies as any auction that nears completion of the at least one product auction, to begin placing one or more bids within bidding parameters until the completing auction is either won or lost by time of auction closing, including enabling interaction between the scan agent and the bid proxy to place the bid of the bidder as close to the time of auction closing as possible and to confirm that a counter-offer has not outbid a most recent bid of the bidder; and

means for computing and executing another valid higher bid for a forward auction or lower bid for a reverse auction that is within the bidding parameters, if the counter-offer has been made and accepted by the auction site that is higher for the forward auction or lower for the reverse auction than the most recent bid detected by the scan agent.